

राज्य शिक्षा केन्द्र म.प्र. भोपाल

पुनः परीक्षा सत्र 2023-24

विषय - गणित (अंग्रेजी माध्यम)

Time $2\frac{1}{2}$ hrs.

Class - 8

M.M. 60

Multiple Choice Questions. (Q. 1 to 5)

Instructions- There are 4 options given for each question. Choose the correct option and write. Each question carries 1 mark.

- Q.1 $(\frac{2}{3}) - (-\frac{2}{3}) = ?$ (1)
 (A) $\frac{2}{3}$ (B) $-\frac{2}{3}$ (C) $\frac{4}{3}$ (D) $-\frac{4}{3}$
- Q.2 The linear equation of one variable is - (1)
 (A) $2x+3=0$ (B) $2x+y=0$ (C) $xy=3$ (D) $xy=3$
- Q.3 The measure of three angles of a quadrilateral is 75° each, the measure of the fourth angle will be - (1)
 (A) 75° (B) 90° (C) 15° (D) 225°
- Q.4 441 is the square of which number? (1)
 (A) 19 (B) 21 (C) 22 (D) 26
- Q.5 $\frac{1}{1000000}$ metre is equal to - (1)
 (A) 10^{-6} metre (B) 10^6 metre (C) 10^{-10} metre (D) 6^{-10} metre

Fill in the blanks. (Q. 6 to 10)

Instructions- Fill in the following blanks. Each question carries 1 mark.

- Q. 6 Additive identity of Rational number $\frac{a}{b}$ is _____. (1)
- Q. 7 Square is a type of Rectangle in which all the sides are _____. (1)
- Q. 8 The information collected in the form of numbers is called _____. (1)
- Q. 9 The amount of sales tax is _____ to the bill amount. (1)
- Q. 10 The value of 4^{-3} will be _____. (1)

Very Short Answer Type Questions. (Q. 11 to 16)

Instructions - Solve the following questions. Each question carries 2 marks.

- Q. 11 How many sides does a regular polygon have if each of its exterior angle is 60° . (2)

(1)

P.T.O.

- Q. 12 Find the value of $8^{-1} \times \frac{5}{2^{-1}}$ (2)
- Q. 13 Which proportion is there in the following- (2)
- The time taken for a fixed journey and the speed of the vehicle.
 - The population of a country and the area of land per person.
- Q. 14 An electric pole, 14 metres high, casts a shadow of 10 metres. Find the height of a tree that casts a shadow of 15 metres under similar conditions. (2)
- Q. 15 Find the square of 35 using 'Ekadhikena Purvena' method. (2)
- Q. 16 Find cube of 32 by using formula $(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$ (2)

Short Answer Type Questions. (Q. 17 to 22)

Instructions- Solve the following questions. Each question carries 3 marks.

- Q. 17. Find the value of $\left\{\left(\frac{9}{16}\right) \times \left(\frac{4}{12}\right)\right\} + \left\{\left(\frac{9}{16}\right) \times \left(-\frac{3}{9}\right)\right\}$ by using the distributive property. (3)
- Q. 18. Solve the following: $5x + \frac{7}{2} = \frac{3}{2}x - 14$ (3)
- Q. 19. The age of 20 teachers (in years) is given -



Observe the above graph and answer the following questions - (3)

- What is the information given by the graph?
 - Which age group has least member of teachers?
 - How many teachers are there in the least age group?
- Q. 20 Find the third member of the pythagorean triplet whose two members are 6 and 8. (3)
- Q. 21 Anju makes a cuboid of plasticine, whose sides measure 5cm., 2cm. and 5cm. How many such cuboids are required to make a cube? (3)
- Q. 22 72% of 25 students are interested in Mathematics. How many are not interested in Mathematics? (3)

Long Answer Type Questions. (Q. 23 to 26)

Instructions- Solve the following questions. Each question carries 5 marks.

- Q. 23 Solve: $(a+b+c)(a+b-c)$ (5)
- Q. 24 In a building there are 25 cylindrical pillars. The radius of each pillar is 35 cm. and height is 5 metres. Find the total cost of painting all pillars at the rate of ₹ 7 per square metre. (5)
- Q. 25 Factorise $4y(z^2+6z-16)$ and divide it by $2y(z+8)$ (5)
- Q. 26 Plot a graph to show the following data- (5)

No. of litres of petrol	10	15	20	25
Cost of petrol in ₹	500	750	1000	1250